

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-5, 17, 19, and 21-23 are pending in the present application. Claims 1, 17, and 19 are amended and Claims 21-23 are added by the present amendment. Claims 6-16, and 20 stand withdrawn in response to a previous restriction requirement.

Amendments to Claims 1, 17, and 19, and new Claims 21-23, find support in Figure 9. Accordingly, it is believed no new matter is added.

In the outstanding Office Action, Claims 1-3, 17, and 19 were rejected under 35 U.S.C. § 103(a) as unpatentable over Japanese Patent No. 59-33787 to Matsushita in view of U.S. Patent No. 2,181,274 to Jackson et al. (herein "Jackson"); Claims 4 and 5 were rejected under 35 U.S.C. § 103(a) as unpatentable over Matsushita in view of Jackson, Japanese Patent No. 9-325288 to Nakajima, Japanese Patent No. 54-140241 to Hashimoto, and U.S. Patent No. 6,292,647 to Ishida.

Applicants and applicants' representatives thank Examiner Leung for the courtesy of a personal interview with applicants' representatives on May 17, 2004. During the interview, differences between the claimed invention and the applied art, and the rejections noted in the outstanding Office Action, were discussed. No agreement regarding allowability was reached; however, the Examiner agreed to reconsider the rejections in light of arguments presented during the interview. Arguments presented during the interview, as well as additional arguments, are discussed below.

Amended Claim 1 is directed to an induction heating roller device including an induction coil unit, a hollow heating roller, and a coreless transformer coupling. The induction coil unit has a primary coil, the hollow heating roller has a secondary coil, and the coreless transformer coupling couples the primary coil to the secondary coil. Further, the

secondary coil has a secondary resistance value substantially equal to a secondary reactance, and the hollow heating roller is rotatably supported. Amended independent Claims 17 and 19 include similar features.

This arrangement of an induction heating roller advantageously results in a more rapid and efficient warm-up time.¹

Claims 1-3, 17, and 19 were rejected under 35 U.S.C. § 103(a) as unpatentable over Matsushita in view of Jackson. Applicants respectfully traverse that rejection.

As discussed during the interview, Jackson does not teach or suggest a relationship between secondary coil resistance and reactance for coreless transformers. In Figs. 1 and 2, Jackson only discloses a secondary winding 2 with a magnetic metal core 1 surrounded by a primary winding 4. Thus, the transformer arrangement disclosed by Jackson is only a magnetic core transformer, and Jackson does not disclose a coreless transformer. Further, applicants respectfully note that Jackson insists that resistance/reactance relationships disclosed therein do not apply to coreless transformers. In particular, Jackson indicates

[t]he principles of our invention will apply to any induction heating device having any arrangement of its component parts whatsoever as long as the arrangement fulfills the condition that current flowing in the part designated as the primary will induce heating currents in the part designated as the secondary and the secondary is composed of a magnetic and a non-magnetic portion.²

In other words, Jackson requires the secondary coil to include a magnetic core portion and requires a coupling of the primary to secondary using the magnetic core, which is different than the claimed invention that includes a coreless coupling between primary and secondary coils. Hence, applicants respectfully submit that Jackson does not teach or suggest “a coreless transformer coupling configured to couple the primary coil to the secondary coil,

¹ Specification at page 2, lines 28-32.

² Jackson at column 2, lines 52-60.

said secondary coil having a secondary resistance value substantially equal to a secondary reactance,” as in the independent claims.

In addition, applicants respectfully note that Matsushita also does not teach or suggest a coreless transformer coupling with a particular relationship between secondary resistance and secondary reactance, and does not teach or suggest “a hollow heating roller being rotatably supported,” as in the independent claims.

Accordingly, it is respectfully submitted that independent Claims 1, 17, and 19 and claims depending therefrom, are allowable.

Claims 4 and 5 were rejected under 35 U.S.C. § 103(a) as unpatentable over Matsushita in view of Jackson, Nakajima, Hashimoto, and U.S. Patent No. 6,292,647 to Ishida. Applicants also respectfully traverse that rejection.

Claims 4 and 5 depend from Claim 1, which as discussed above is believed to be allowable. Further, the remaining references also do not teach or suggest the features of the independent claims. Accordingly, applicants respectfully request that rejection be withdrawn.

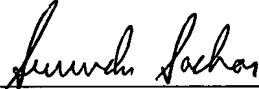
New Claim 21 is directed to an induction heating roller device that includes features similar to amended Claim 1 and a secondary coil having a layer of plastic resin, new Claim 22 recites a glass sealing layer provided between the secondary coil and the layer of plastic resin, and new Claim 23 recites an electrically non-conductive base body provided on an innermost circumferential surface of the hollow heating roller. Applicants respectfully submit that the applied references also do not teach or suggest these features.

Accordingly, it is respectfully submitted that independent Claims 21-23 are also allowable.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Attorney of Record
Registration No. 25,599

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/03)

Surinder Sachar
Registration No. 34,423

GJM:SS:ZSS:dnf

I:\ATTY\ZS\21'S\218\218303US\218303 AMENDMENT.DOC